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# Microdata and TableBuilder: Employee Earnings and Hours, Australia

Detailed earnings and hours statistics for characteristics such as industry, occupation, sex, age, full-time/part-time, and method of setting pay

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# Accessing the data

The biennial Survey of Employee Earnings and Hours (EEH) provides detailed statistics on the composition and distribution of employee earnings, hours paid for and the methods used to set employee's pay. For the latest release of EEH see <a href="Employee Earnings and Hours">Employee Earnings and Hours</a>, <a href="Australia">Australia</a> (<a href="https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/latest-release</a>). When performing analysis using EEH microdata, see the corresponding cycle's publication for summary results, methodology and other information.

You are able to access EEH data in:

- TableBuilder produce your own EEH tables and graphs
- DataLab analyse detailed microdata

Microdata is currently available for the following cycles:

- Employee Earnings and Hours, Australia, May 2023 (https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/employee-earnings-and-hours-australia/may-2023)
- Employee Earnings and Hours, Australia, May 2021 (https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/may-2021)
- Employee Earnings and Hours, Australia, May 2018 (https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/may-2018)
- Employee Earnings and Hours, Australia, May 2014 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6306.0Main+Features1May%202014?OpenDocument)
- Employee Earnings and Hours, Australia, May 2012 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6306.0Main+Features1May%202012?OpenDocument)

<u>Compare data services (https://www.abs.gov.au/about/data-services/compare-data-services)</u> to see what's right for you or <u>Apply for access (https://www.abs.gov.au/statistics/microdata-tablebuilder)</u>.

#### Available data

The Survey of Employee Earnings and Hours (EEH) microdata products include data items such as:

- Summation items
  - Weekly cash earnings (ordinary time, overtime, total)
  - Weekly hours paid for (ordinary time, overtime, total)
  - Hourly cash earnings (ordinary time, overtime, total)
- Employer characteristics
  - Employment size
  - Industry
  - Sector
  - State
- Employee characteristics
  - Age
  - Full-time / part-time status
  - Managerial status
  - · Method of setting pay
  - Occupation
  - Rate of pay
  - Sex
  - Type of employee

The data items list in the Data downloads section is the definitive source of available data items and categorisations across EEH microdata products. Before purchasing your subscription, use the data items list to confirm the EEH microdata products fulfil the requirements for your research.

## Using TableBuilder

For general information relating to TableBuilder or instruction on how to use features of the TableBuilder product, please refer to <u>TableBuilder (https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder)</u>.

#### Weights

When tabulating data in TableBuilder, employee weights are automatically applied to the underlying sample counts for all summations. Weighting is the process of adjusting results from a sample survey to infer results for the total population. For more details on EEH methodology see <a href="Employee Earnings and Hours, Australia methodology">Employee Earnings and Hours, Australia methodology</a> (https://www.abs.gov.au/methodologies/employee-earnings-and-hours-australia-methodology/may-2023).

#### **Relative Standard Errors**

The estimates in the EEH survey are based on information relating to a sample of employers and employees, rather than a full enumeration of the population. As a result, estimates are subject to sampling variability. Analysis undertaken on EEH estimates should incorporate appropriate quality measures which are available in the form of Relative Standard Errors (RSEs). The RSE is the expression of the standard error as a percentage of the estimate. See Confidentiality and relative standard error (https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder/confidentiality-and-relative-standard-error).

Further information on the reliability of EEH estimates can be found in <a href="Employee Earnings">Employee Earnings</a> and Hours, Australia methodology (https://www.abs.gov.au/methodologies/employee-earnings-and-hours-australia-methodology/

## Confidentiality

A confidentiality process called perturbation is applied to the data in TableBuilder to avoid releasing information that may lead to the identification of individuals, families, households, dwellings or businesses. See <u>Confidentiality and relative standard error (https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder/confidentiality-and-relative-standard-error)</u>.

#### Distributional statistics and other data

The Employee Earnings and Hours, Australia (https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/latest-release) publication contains detailed data cubes, including distributional earnings statistics. For customised data requests that can't be created using TableBuilder, contact our Information Consultancy Service (https://www4.abs.gov.au/web/survey.nsf/contactform/).

# **Using DataLab**

The DataLab environment allows real time access to detailed microdata files from the Survey of Employee Earnings and Hours (EEH) through a portal to a secure ABS environment. The level of detail provided within the DataLab exceeds that previously provided in the Expanded CURF and provides researchers greater access to the data.

For more information about the DataLab, see the <u>DataLab (https://www.abs.gov.au/statistics/microdata-tablebuilder/datalab)</u> page.

The DataLab is an interactive data analysis solution available for users to run advanced statistical analyses, for example, multiple regressions and structural equation modelling. The DataLab environment contains recent versions of R, SAS, Stata and Python analytical software. Controls in the DataLab have been put in place to protect the identification of individuals and organisations. All output from DataLab sessions must be cleared by an ABS officer before it can be released.

Users intending to purchase DataLab for the use of EEH microdata should ensure that the data and the associated level of detail they require is available in this product. The data item list for the microdata file, including relevant population and classification details, can be found in the Excel spreadsheet available from the Data downloads section. This should be used in conjunction with the survey information provided in the methodology for the chosen cycle of analysis.

In addition to the microdata files, DataLab also contains a README file which outlines some of the technical considerations to take into account when performing analysis. This includes preferred methods for calculating key statistics and considerations for data output requirements. It is highly recommended that this document is accessed prior to performing your analysis to ensure data and comparability limitations are understood.

## Counts and weights

EEH uses a two-stage selection approach which determines the final weight of each record. The first stage involves selecting a probability sample of employer units from the ABS Business Register. In the second stage, the selected employers are asked to select a random sample of employees from their payrolls using instructions provided by the ABS.

Care should be taken in the interpretation and use of employment estimates as EEH is not designed specifically to produce estimates on numbers of employees. Users are directed to <u>Labour Force</u>, <u>Australia (https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release)</u> as the primary source for official ABS employment estimates.

Level	Reference period	Record count	Weighted count ('000)
Employee	May 2023	54,516	12,593.1
Employee	May 2021	52,432	11,578.6
Employee	May 2018	54,105	10,647.2
Employee	May 2014	54,861	9,898.9
Employee	May 2012	54,893	9,605.9

## Replicate weights

Replicate weights will also be supplied within the DataLab microdata file. Replicate weights are used to calculate the standard error and relative standard error of the data using the 'Bootstrap' variance estimation method.

## Data downloads

#### EEH data item list

<u>▶ Download XLSX</u>
[207.51 KB]

# History of changes

## Show all

#### 19/06/2024

Detailed microdata now available in DataLab for 2023. Hourly earnings made available as an independent variable for 2023. EEH data item list in the Data downloads section updated to show variable inclusion across available cycles.

#### 10/05/2024

TableBuilder now available for 2023. Hourly earnings made available as an independent variable for 2023. EEH data item list in the Data downloads section updated to show variable inclusion across available cycles.

#### 10/06/2022

Detailed microdata now available in DataLab for 2021. EEH data item list in the Data downloads section updated to show variable inclusion across available cycles.

## 29/03/2022

TableBuilder now available for 2021. EEH data item list in the Data downloads section updated to show variable inclusion across available cycles.

#### 15/12/2020

Detailed microdata now available in DataLab for 2014 and 2012. EEH data item list in the Data downloads section updated to show variable inclusion across available cycles.

#### 02/06/2020

Minor text updates made to Using DataLab section.

## **Quality declaration**

# Institutional environment

The Survey of Employee Earnings and Hours microdata includes the following products:

- TableBuilder produce your own EEH tables and graphs
- DataLab analyse detailed microdata

To maintain confidentiality, microdata files must meet the conditions specified in the Statistics Determination section of the <u>Census and Statistics Act 1905 (https://www.legislation.gov.au/C1905A00015/latest/text)</u>.

More information on confidentiality practices can be found at:

- DataLab (https://www.abs.gov.au/statistics/microdata-tablebuilder/datalab)
- <u>TableBuilder (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/1406.0.55.005)</u>
- How The ABS Keeps Your Information Confidential (https://www.abs.gov.au/websitedbs/D3310114.nsf/Home/ Survey+Participant+Information+-+How+The+ABS+Keeps+Your+Information+Confidential)

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see the <u>ABS Legislative framework (https://www.abs.gov.au/about/legislation-and-policy/legislative-framework)</u>.

#### Relevance

The Survey of Employee Earnings and Hours (EEH) produces estimates of the composition and distribution of employee earnings, the hours they are paid for, and the methods used to set their pay (i.e. award only, collective agreement, or individual arrangement).

EEH data contributes as a key element of labour market information. The principal objective is to facilitate the analysis and monitoring of economic aspects of the Australian labour market. The survey is the only source of earnings and hours paid for data by various methods of setting pay.

Some of the key data items available from EEH microdata include:

- Weekly earnings ordinary time, overtime, and total earnings (available as continuous variables)
- Hours paid for ordinary time, overtime, and total hours paid for (available as continuous variables)
- Hourly earnings ordinary time, overtime, and total earnings (available as continuous variables)
- Method of setting pay
- Rate of pay adult, junior, apprentice or trainee, and disability
- Age
- Employee characteristics sex, full-time/part-time status, managerial status, occupation (available at the 1, 2, 3 and 4 digit ANZSCO level)
- Employer characteristics industry, state, and employment size

For further details on the content of EEH microdata products, please see the data item list in the Data downloads section.

#### **Timeliness**

The reference period for the most recent EEH survey was the last pay period ending on or before 19 May 2023. Results from the survey were released on 24 January 2024 in the publication <a href="Employee Earnings and Hours">Employee Earnings and Hours</a>, Australia (<a href="https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/latest-release">https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/latest-release</a>).

# **Accuracy**

EEH microdata products contain finer level data than the publication for the corresponding cycle. For more information on the level of detail provided, see the associated data item listings available from the Data downloads section.

Steps to confidentialise the microdata are taken in such a way as to maximise the usefulness and accuracy of the content while maintaining the confidentiality of respondents selected in the survey. As a result, it may not be possible to exactly reconcile all the statistics produced from the microdata with other published statistics. For further information on microdata confidentiality, refer to <a href="How the ABS keeps your information confidential">How the ABS keeps your information confidential</a> (https://www.abs.gov.au/participate-survey/privacy-security-and-confidentiality/survey-participant-information-how-abs-keeps-your-information-confidential).

#### Coherence

The Survey of Employee Earnings and Hours has been conducted either annually or biennially since 1975. From 1996 to 2018 the survey has been conducted biennially. It was postponed from May 2020 to May 2021, due to the labour market impacts and disruption from the first wave of the COVID-19 pandemic. The survey resumed its biennial cycle from 2021. The conceptual framework used for this survey and key changes over time are described in <u>Labour Statistics</u>: Concepts, Sources and Methods (https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/latest-release).

# Interpretability

Microdata and TableBuilder: Employee Earnings and Hours, Australia is a key source of information when using EEH microdata. It includes:

- Details on available microdata products
- Available data
- User information for TableBuilder and DataLab

Further information about the Survey of Employee Earnings and Hours is available in the latest release; <a href="Employee">Employee</a>
<a href="Earnings and Hours">Earnings and Hours</a>, <a href="Australia">Australia</a> (<a href="https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings-and-hours-australia/latest-release</a>) and in <a href="Labour Statistics">Labour Statistics</a>: Concepts, <a href="Sources and Methods">Sources and Methods</a> (<a href="https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/latest-release</a>).

# Accessibility

Microdata products are only available to approved users. Users wishing to access microdata should read the <u>Frequently asked questions</u> (https://www.abs.gov.au/statistics/microdata-tablebuilder/frequently-asked-questions) before applying for access. Users should also familiarise themselves with information available via the <u>Microdata Entry Page (https://www.abs.gov.au/statistics/microdata-tablebuilder)</u>.

The <u>Compare data services (https://www.abs.gov.au/about/data-services/compare-data-services)</u> page contains general information on different types of microdata product access. A full list of available microdata can be viewed via <u>Available Microdata (https://www.abs.gov.au/statistics/microdata-tablebuilder/available-microdata-tablebuilder)</u>.

For further information, contact information is available on the <u>Microdata contacts (https://www.abs.gov.au/about/contact-us)</u> page.

The <u>ABS Privacy Policy (https://www.abs.gov.au/about/legislation-and-policy/privacy/privacy-abs)</u> outlines how the ABS handles any personal information that you provide to us.

# Previous catalogue number

This release previously used catalogue number 6306.0.55.001.